

Page 1

Stop \*NR2\*

120	FLOW WATER JET	0.00			
*120*					
Waterjet	Memo	0.00			
FLOW CNC Waterjet	Cut Blank as per File D3167-1 <u>BLANK</u>				
UHMW 1"					
130	HAAS CNC VERTICAL MACHINING #1	0.00			
*130*					
HAAS 1	Memo	0.00	PO	12/10/25	
HAAS CNC vertical machine #1	Note: (2) Bearpaw for (1) Kit 1-Inspect material for defects or damage prior to machining 2-Machine as per Folio FA285 and Dwg D3167 3-Deburr				
140	QC2- Inspect parts off machine FAI/FAIB	0.00			
*140*					
QC	Memo	0.00	PO	12/10/25	
Quality Control					

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: AK Date: 12/11/02QA Closed: ck Date: 12/11/05

Work Order: <u>90561</u> Part No. <u>03167-1</u> NCR No. <u>12-2001</u>				<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input checked="" type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b> <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input checked="" type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input checked="" type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>																								
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																									
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector																		
Doc/Data <input checked="" type="checkbox"/>	12/10/25	130	1	ONE area the floor dim is .215 and the outer wall is .591  <i>broken</i> Reason: an helicoil rose the cover plate and move upward the bearing (brake)	12/10/25	ACCEPTABLE DEVIATION THIS W/O ONLY.	PO 12/10/25	DAS 08 2-89 12/10/26	DAS 1F 8-5- 2/16/25																		
Equip/Tooling <input type="checkbox"/>																											
Operator <input type="checkbox"/>																											
Material <input type="checkbox"/>																											
Setup <input type="checkbox"/>																											
Other <input type="checkbox"/>																											
Process <input type="checkbox"/>																											
Supplier <input type="checkbox"/>																											
Training <input type="checkbox"/>																											
Unapproved <input type="checkbox"/>																											

## FAULT CATEGORY

## Landing Gear

- |   |
|---|
| <input type="checkbox"/> Bending                      |
| <input type="checkbox"/> Centre Not Concentric to O/S |
| <input type="checkbox"/> Cracks                       |
| <input type="checkbox"/> Crushed/Crimped              |
| <input type="checkbox"/> Cuffs                        |
| <input type="checkbox"/> Heat Treat                   |
| <input type="checkbox"/> Inspection Strip in Tube     |
| <input type="checkbox"/> Ripples in Bend              |
| <input type="checkbox"/> Torque Waves in Extrusion    |
| <input type="checkbox"/> Turning Sequence             |
| <input type="checkbox"/> Wave/Twist in Tube           |

## General

- |   |
|---|
| <input type="checkbox"/> Bend           |
| <input type="checkbox"/> BOM/Route      |
| <input type="checkbox"/> Broken/Damaged |
| <input type="checkbox"/> Burrs          |
| <input type="checkbox"/> Contamination  |
| <input type="checkbox"/> Countersink    |
| <input type="checkbox"/> Cut Too Short  |
| <input type="checkbox"/> Drill Holes    |
| <input type="checkbox"/> Drawing        |
| <input type="checkbox"/> Finish         |
| <input type="checkbox"/> Folio          |

- |  |
|--|
| <input type="checkbox"/> Grain                           |
| <input type="checkbox"/> Hardware                        |
| <input type="checkbox"/> Inspection Incomplete           |
| <input type="checkbox"/> Instructions Incomplete/Unclear |
| <input type="checkbox"/> Maintenance                     |
| <input type="checkbox"/> Mislabeled                      |
| <input type="checkbox"/> Misread                         |
| <input type="checkbox"/> Offset                          |
| <input type="checkbox"/> Out of Calibration              |
| <input type="checkbox"/> Out of Sequence                 |
| <input type="checkbox"/> Outside Dimensions              |

- |  |   |
|--|---|
| <input type="checkbox"/> Ovalized              | <input type="checkbox"/> Pressure/Forced    |
| <input type="checkbox"/> Over/Under tolerance  | <input type="checkbox"/> Temperature/Cure   |
| <input type="checkbox"/> Part Incorrect        | <input type="checkbox"/> Weld               |
| <input type="checkbox"/> Part Lost/Missing     | <input type="checkbox"/> Wrong Stock Pulled |
| <input checked="" type="checkbox"/> Part Moved |   |
| <input type="checkbox"/> Positioned Wrong      |   |
| <input type="checkbox"/> Power Loss/Surge      | <input checked="" type="checkbox"/> Other   |

Molig

# Work Order ID 90561

\*90561\*

Page 2

September-19-12 2:36:09 PM

Item ID: D3167-1 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Bearpaw  
 Start Date: 9/18/12 Start Qty: 4.00 \*4\* Cust Item ID:  
 Required Date: 10/05/12 Req'd Qty: 4.00 \*4\* Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC8- Inspect parts - second check	0.00							
*150*									
QC	Memo	0.00							
Quality Control									
151	Identify as per dwg & Stock Location: _____	0.00							
*151*									
Packaging	Memo	0.00							
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
*190*									
QC	Memo	0.00							
Quality Control									

12-10-30

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>																								
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<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector																		
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Supplier <input type="checkbox"/>																											
Training <input type="checkbox"/>																											
Unapproved <input type="checkbox"/>																											
<b>FAULT CATEGORY</b>																											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other																		

# Picklist Print

September-19-12 2:36:09 PM

Page 1

Work Order ID: 90561

Parent Item: D3167-1

Parent Item Name: Bearpaw

Start Date: 9/18/12

Required Date: 10/05/12

Start Qty: 4.00

Required Qty: 4.00

## Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			120	sf	249.7100	3.6	<del>14.4</del> 14.5			
UHMW 1" Black													Jm 12-10-10
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				MAT018		226.6							
				118814		0							
				120972		1							
				121346		27.1							
				121954		12.8							
				122286		14.3							
				122575		23.8							
				122722		147.6				<del>122.722</del>			
				MAT019		1.5							
				118814		1.5							
				ST052		21.60999474							
				121277		12.8							
				121278		8.80999474							

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
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Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	90561
<b>Description:</b> Bearpaw		<b>Part Number:</b>	D3167-1
<b>Inspection Dwg:</b> D3167 <b>Rev:</b> A1		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article      ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.06 x 45°	+0.030/-0.010	.060	✓		VERN	P40-01
B	5.80	+/-0.030	5.793	✓		"	"
C	0.25 x 45°	+/-0.030	.250	✓		M TAPE	P40-11
D	R0.25	+/-0.030	.250	✓		R-G.	
E	0.200	+/-0.030	.193	✓		MIC	P40-09
F	0.250	+/-0.010	.246	✓		VERN	P40-01
G	0.625	+/-0.030	.623	✓		"	"
H	0.375	+/-0.010	.375	✓		"	"
I	0.950	+0.030/-0.010	.950	✓		"	"
J	3.21	+/-0.030	3.21	✓		"	"
K	19.00	+/-0.030	19.00	✓		M TAPE	P40-11
L	Ø0.260	+0.005/-0.000	.260	✓		VERN	P40-01
M	Ø0.93	+/-0.030	.930	✓		"	"
N	0.30	+0.030/-0.000	.301	✓		MIC	P40-09
O	0.375	+/-0.030	.375	✓		VERN	P40-01
P	7.23	+/-0.030	7.23	✓		M TAPE	P40-11
Q	4.54	+/-0.010	4.54	✓		VERN	P40-01
R	2.00	+/-0.030	<del>2.016</del> <sup>1.997</sup>	✓		"	"
S	12.000	+/-0.010	12.000	✓		M TAPE	P40-11
T	6.000	+/-0.010	6.000	✓		VERN	P40-01
U	23.75	+/-0.030	23.75	✓		M TAPE	P40-01

<b>Measured by:</b> <u>PD</u>	<b>Audited by:</b> <u>DAS</u> <u>08</u>	<b>Prototype Approval:</b>	N/A
<b>Date:</b> <u>12/10/25</u>	<b>Date:</b> <u>12/10/26</u>	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue      P/O D130-700-011	KJ/RF <u>[Signature]</u>	<u>[Signature]</u>

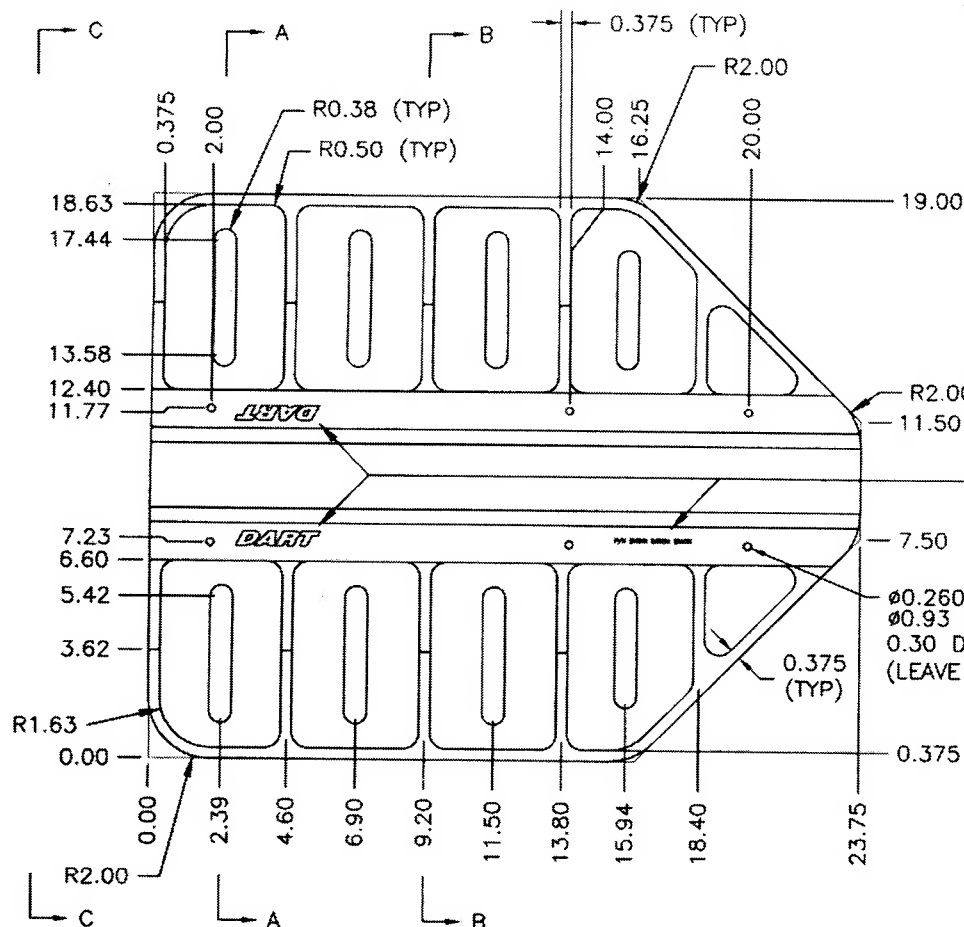
**DART**



RELEASED  
02-10-25

SHED COPY  
RECEIVED  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO ENDORSEMENT  
WITHIN NOTICE  
WORK ORDER  
NO 90561 ML5  
12-09-20

ENGRAVE LOGO TO MAX  
DEPTH OF 0.012. ENGRAVE  
PART AND BATCH NUMBERS  
TO MAX DEPTH OF 0.010.  
(TYPICAL LOCATION AS  
ILLUSTRATED)



D3167-1

MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689  
1.00 THICK (MACHINE TO 0.950)  
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

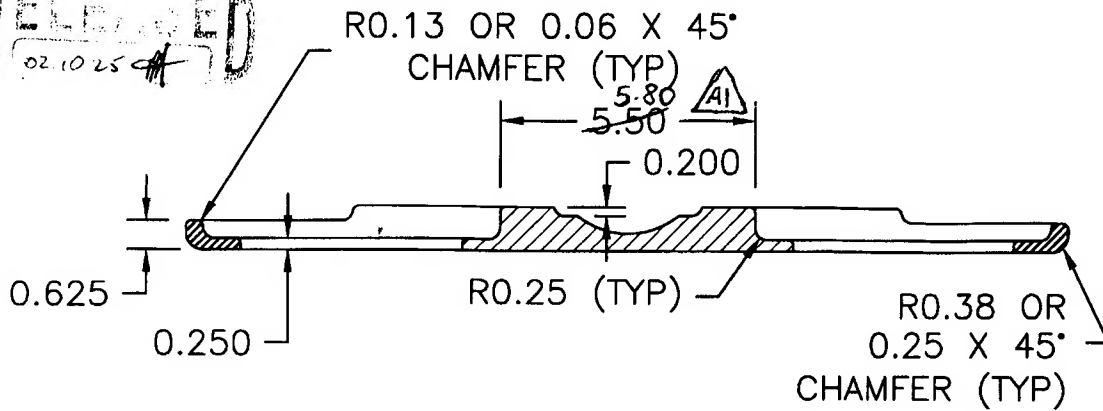
DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	TITLE	REV. A
02.10.08	BEARPAW	SHEET 1 OF 2
A	02.10.08	SCALE
A1	02.12.17	1:6
	5.80 WAS 5.50	



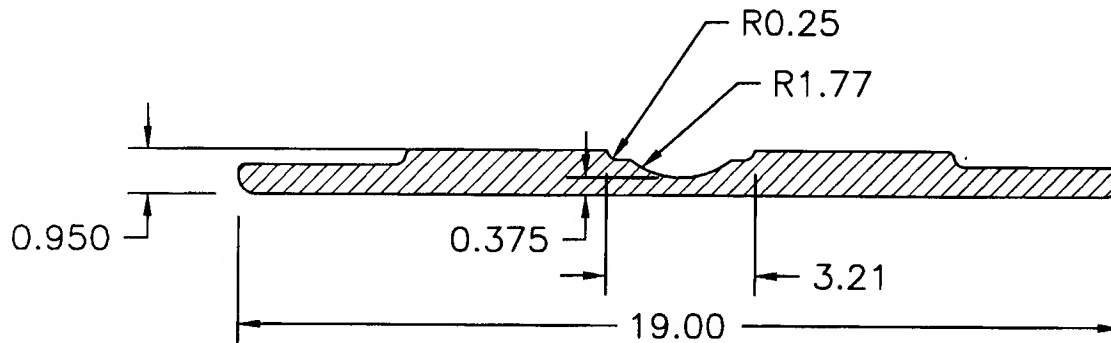


DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3167	REV. A SHEET 2 OF 2
DATE 02.10.08		TITLE BEARPAW	SCALE 1:4

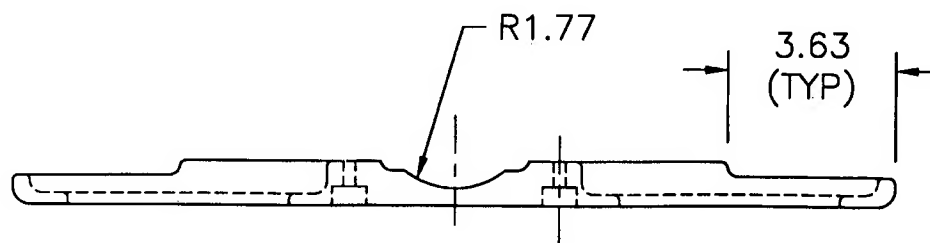
RELEASED  
02.10.25



SECTION A-A



SECTION B-B



SECTION C-C

90561

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